California Regional Water Quality Control Board
North Coast Region

MONITORING AND REPORTING PROGRAM NO. R1-0106-16NPD*

FOR

CITY OF WILLITS
WASTEWATER TREATMENT FACILITY (WWTF)

Mendocino County

## WASTEWATER MONITORING

Composite samples may be taken by an automatic sampling device approved by the Regional Water Board Executive Officer (Executive Officer) or by grab samples composited in proportion to flow. In compositing grab samples, the sampling interval shall not exceed one hour. The following shall constitute the monitoring program:

### Influent Monitoring

| Constituent | Units | Type of Sample | Frequency |
|---|---|---|---|
| BOD (20° C, 5-day) | mg/l | 8-hour composite | weekly |
| Suspended Solids | mg/l | 8-hour composite | weekly |

### Effluent Monitoring (SN001)

| Constituent | Units | Type of Sample | Frequency |
|---|---|---|---|
| BOD (20° C, 5-day) | mg/l | 8-hour composite | weekly |
| Suspended Solids | mg/l | 8-hour composite | weekly |
| Settleable Solids | ml/l | 8-hour composite | weekly |
| Coliform Organisms (Total) | | MPN/100 ml grab | weekly |
| Chlorine Residual (before and after dechlorination) | mg/l | grab | daily |
| pH | ---- | grab | weekly |
| Daily Flow | gpd | ---- | continuous |

## RECEIVING WATER MONITORING

Receiving water monitoring shall be conducted when wastewater is being discharged to the Eel River or its tributaries. Samples shall be collected in an ambient background location upstream of the discharge and downstream in the vicinity of the discharge. Samples shall be collected monthly and shall be analyzed for pH and dissolved oxygen.

Visual observations shall be made monthly of the receiving water upstream and downstream of the discharge for evidence of floatables (solids, liquids, foam, scum), visible films (oils, greases,

waxes), aquatic growths, and discoloration. Observations shall be recorded and included in quarterly monitoring reports.

Daily flow monitoring (gpd) of receiving waters shall be conducted when wastewater effluent is being discharged to the Eel River or its tributaries. The flow of the receiving water shall be that flow measured at the confluence of Broaddus and Baechtel Creeks. Daily flows of the receiving water shall be reported in monthly monitoring reports.

## ACUTE TOXICITY MONITORING

The presence of acute toxicity in the effluent shall be determined by conducting 96-hour static or static renewal tests using rainbow trout *Oncorhynchus mykiss* as the test species in accordance with wastewater testing method specified in EPA 600/4-90/027F, 4th edition or subsequent editions. An 8-hour composite sample of effluent shall be collected four times each year, at equal time intervals, during the winter discharge period and when discharge to the Eel River or its tributaries is occurring.

Testing procedures shall be as specified in Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms (EPA 600/4-90-027F, August 1993 or subsequent editions). The tests shall be conducted with concurrent reference toxicant tests (control samples). Both the reference toxicant and the effluent test must meet all test acceptability criteria as specified in the acute toxicity manual. If the test acceptability criteria are not achieved, then the permittee shall resample and retest within 14 days. Toxicity tests shall be conducted such that pH and temperature conditions shall be maintained the same as in the effluent at the time the test sample is collected. Ammonia, pH and temperature shall be recorded at 24-hour intervals during the test and shall be reported with the toxicity test results.

If the acute toxicity effluent limitation is exceeded, the permittee shall initiate a Toxicity Reduction Evaluation (TRE) in accordance with **E. GENERAL PROVISION** 25. Toxicity Identification, Source and Reduction Evaluations for Acute and Chronic Toxicity.

## CHRONIC TOXICITY MONITORING

1. Chronic Toxicity Monitoring Requirements

   a. Sampling. The permittee shall collect 8-hour composite samples of effluent (SN 001) for critical life stage toxicity testing as indicated below. For toxicity tests requiring renewals, 8-hour composite samples collected on consecutive days are required.

   b. Test Species: Chronic toxicity shall be monitored by using critical life stage test(s) and the most sensitive test specie(s) identified by screening phase testing in **E. GENERAL PROVISION** 24(d) of this order. Test specie(s) shall be approved by the Executive Officer. Two test species may be required if test data indicate that there is alternating sensitivity between the two species.

c. Frequency:

| | |
|---|---|
| Routine Monitoring: | Twice per year |
| Accelerated Monitoring: | Quarterly, or as otherwise specified by the Executive Officer. |

d. Conditions for Accelerated Monitoring: The permittee shall conduct accelerated monitoring when either of the following conditions are exceeded:

i. Three-sample median value of 1 Tuc, or

ii. Single-sample maximum value of 2 Tuc.

e. Methodology: Sample collection, handling and preservation shall be in accordance with U.S. EPA protocols. The test methodology used shall be in accordance with the references cited in this Permit or as approved by the Executive Officer. The sensitivity of the test organisms to a reference toxicant shall be determined concurrently with each bioassay and reported with the test results.

f. Dilution Series: The permittee shall conduct tests of effluent (SN 001) at 100 percent, 85 percent, 70 percent, 50 percent, and 25 percent of its initial strength. Dilution and control waters shall be obtained from an area unaffected by the discharge in the receiving waters. Standard dilution water may be used if the above sources exhibit toxicity or if approved by the Executive Officer.

2. Chronic Toxicity Reporting Requirements

a. Routine Reporting: Toxicity test results for the current reporting period shall include, at a minimum, for each test:

i. sample date(s)
ii. test initiation date
iii. test species
iv. end point values for each dilution (e.g. number of young, growth rate, percent survival)
v. NOEC value(s) in percent effluent
vi. $IC_{15}$, $IC_{25}$, $IC_{40}$, and $IC_{50}$ values (or $EC_{15}$, $EC_{25}$ … etc.) in percent effluent
vii. TUc values (100/NOEC, 100/$IC_{25}$, and 100/$EC_{25}$)
viii. Mean percent mortality (±s.d.) after 96 hours in 100% effluent (if applicable)
ix. NOEC and LOEC values for reference toxicant test(s)
x. $IC_{50}$ or $EC_{50}$ value(s) for reference toxicant test(s)
xi. Available water quality measurements for each test (eX. pH, D.O., temperature, conductivity, hardness, salinity, ammonia)

b. Compliance Summary: The results of the chronic toxicity testing shall be provided in the most recent self-monitoring report and shall include a summary table of chronic toxicity data from at least eleven of the most recent samples. The information in the table shall include the items listed above under 2.a., item numbers i, iii, v, vi($IC_{25}$ or $EC_{25}$), vii, and viii.

After at least four test rounds, the permittee may request the Executive Officer to decrease the required frequency of testing, and/or to reduce the number of compliance species to one. Such a request may be made only if toxicity exceeding the TUc values specified in the effluent limitations was never observed using that test specie.

## REPORTING FOR WASTEWATER, RECEIVING WATER, ACUTE TOXICITY, AND CHRONIC TOXICITY MONITORING

Monitoring reports shall be submitted to the Regional Water board monthly. If holiday work schedules prevent sample collection on the date specified by this monitoring program, a substitute sample shall be collected and an explanation of the circumstances shall be included with the self-monitoring report. Monthly monitoring reports are due in the Regional Water Board office by the first day of the second month following the monitoring period.

## DETERMINATION OF PRIORITY POLLUTANTS REQUIRING WATER QUALITY-BASED EFFLUENT LIMITATIONS

The Regional Water Board will conduct the analysis according to the California Toxics Rule (CTR) for each priority pollutant to determine if a water quality-based effluent limitation is required in the permittee's Permit. It is the permittee's responsibility to provide all information requested by the Regional Water Board for use in the analysis. The Regional Water Board will use all available, valid, relevant, representative information to determine whether a discharge may: (1) cause, (2) have a reasonable potential to cause, or (3) contribute to an excursion above any applicable priority pollutant criterion or objective.

Sludge Handling and Disposal

Composite samples may be taken by grab samples composited in proportion to rate of sludge volume generated. In compositing grab samples, the sampling interval shall not exceed 24 hours. The following shall constitute the monitoring program:

| Constituent | Units | Type of Sample |
|---|---|---|
| Total Inorganic Nitrogen | mg/l | 24-hour composite |
| Ammonia Nitrogen | mg/l | 24-hour composite |
| Nitrates | mg/l | 24-hour composite |
| Total Dissolved Solids | mg/l | 24-hour composite |
| Percent Solids | mg/l | 24-hour composite |
| Volatile Suspended Solids | mg/l | 24-hour composite |
| pH | ---- | 24-hour composite |
| EPA Priority Pollutants | ---- | 24-hour composite |

For the constituents listed above, sludge sampling and analysis shall be performed at least annually.

Sludge Disposal Area

By May 30, grab samples of groundwater from the upgradient and downgradient monitoring wells shall be collected and analyzed for the following:

| Constituent | Units |
|---|---|
| Total Inorganic Nitrogen | mg/l |
| Total Dissolved Solids | mg/l |
| Total Coliform Organisms | MPN |

And, other constituents as deemed necessary by the Executive Officer based upon results of sludge analyses.

Groundwater samples shall be collected and analyzed annually.

## REPORTING

Monthly monitoring reports for the Wastewater Treatment Facility shall be submitted to the Regional Board such that it is received by the 1st day of the second month following the sampling period.

Duplicate signed copies of these reports shall be submitted to the Regional Administrator and the State at the following address:

Regional Administrator
U.S. Environmental Protection Agency
Region IX
Attn: WTR-7, NPDES/DMR
75 Hawthorne Street
San Francisco, CA 94105

Executive Officer
California Regional Water
Quality Control Board
North Coast Region
5550 Skylane Boulevard, Suite A
Santa Rosa, CA 95403

Annual reports for Sludge Handling and Disposal, and Groundwater Monitoring shall be submitted to the Regional Board such that it is received by the 30th of January of the following year. Annual reports shall include, but shall not be limited to, the following:

a. The date of the report;
b. A statement describing inspection observations and the status of compliance with requirements contained in this Order for the mixing, stockpiling and disposal area controls;
c. The monthly volume of municipal sludge generated;
d. The date, volume, weather condition and location of municipal sludge disposed;

e. Analytical results of the municipal sludge and groundwater quality as required above;
f. Any other comments relevant to these waste discharge requirements.

Ordered by _____
Lee A. Michlin
Executive Officer

June 28, 2001

* Temporary order number, final number will be assigned when adopted

(rrowillitsmonitoring)